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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MESFIN, YEMANE

ART UNIT

PAPER NUMBER

2444

NOTIFICATION DATE

DELIVERY MODE

01/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

epatent@usiplaw.com

Office Action Summary	Application No. 10/781,913	Applicant(s) RUSCHE ET AL.	
	Examiner Yemane Mesfin	Art Unit 2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/23/2008 has been entered. Claims 1-16 remain pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allison et al. (WO 200271234 A) hereinafter referred to as Allison in view of Gould et al. (US 20040199592 A1) hereinafter referred to as Gould and further in view of Mazur (US Patent # 7,424,209).

As per claims 1 and 8: Allison disclosed a method for detecting an undesirable condition (spam) within a messaging network [abstract, Page 1, Lines 12-17 and Page 7, Lines 20-30], comprising: receiving a message [Page 6, Line 27, receiving message]; incrementing a source counter

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and updating the timestamp [Page 15, Lines 12-14 & Lines 30-32, Page 19, Lines 8-14, Page 19, Lines 15-19]; comparing the source counter to a source threshold; and when the source counter exceeds the source threshold over the course of a predetermined amount of time, triggering an alarm indicative of an undesirable condition [Page 14, Lines 7-8, Page 19, Line 15 through Page 20, Line 8, Page 21, Lines 10-15 and Fig. 6 # ST9-ST11].

Allison substantially disclosed the invention as claimed. However, Allison was silent about specific language of “updating the an array of timestamps with a new entry corresponding to a time at which the message from the source was received, the array of timestamps including a timestamp entry for respective source counter increments: removing entries in the array of timestamps that are older than a fixed window size, and decrementing the source counter for each entry so removed;” as recited in the amended claims 1 and 8.

However, as evidenced by the teachings of Gould, “updating the an array of timestamps with a new entry corresponding to a time at which the message from the source was received, the array of timestamps including a timestamp entry for respective source counter increments: removing entries in the array of timestamps that are older than a fixed window size, and decrementing the source counter for each entry so removed;” was known in the art at the time the invention was made (see Gould, Abstract, Figs. 2-4, Page 1, ¶0011 through Page 2, ¶0019, Page 3, ¶0035 through ¶0038, Page 3, ¶0041 through Page 4, ¶0048). Thus, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Gould related to detecting and preventing spam from a specific source and have modified the teachings of Allison, in order to “determine whether e-mail messages originating from an IP address are spam and, if identified as spam, for limiting e-mail traffic originating from that IP address”

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(Gould, page 1, ¶0010) and “ for differentiating between legitimate e-mail and spam and for managing the bandwidth available for e-mail messaging to a particular IP address assigned by an IAP” (Gould, page 1, ¶0011).

The already combined teachings of Allison and Gould substantially disclosed the invention as recited in the claims. However, the already combined teaching does not explicitly recite iterating through the array of timestamps to access timestamps associated with the counters. However, in these arts, Mazur discloses iterating through the array of timestamps to access timestamps associated with the counters (see Mazur, Figs. 5-6, creating real-time array of timestamps [Column 6, Line 47 through Column 7, Line 16]; Column 8, Lines 43-63; and Column 9, Line 1 through Column 10, Line 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Mazur related to the methodology of generating and navigating through array of timestamps and have modified the already combined teachings of Allison and Gould in order to properly determine specific time events associated with the data communications (see Mazur, Column 9, Lines 38-67).

As per claim 2: Allison further disclosed identifying a destination for the message [Page 14, Lines 9-11, receiving (destination) party is identified through plurality of identifiers]; incrementing a destination counter [Page 15, Lines 29-32, next time the message is received having the same parameters, locating previously created entry in the database and incrementing the counter]; comparing the destination counter to a destination threshold; and when the destination counter exceeds the destination threshold over the course of another period of time, triggering a destination alarm [Page 14, Lines 11-17, Page 20, Lines 12-16].

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As per claim 3: note that Allison disclosed that the source threshold and the destination threshold comprise different values [Page 13, Table 1, attribute “Threshold” reciting different threshold levels].

As per claims 4 and 9: note that Allison disclosed that the message is a short message system message [Allison disclosed the message been a shot message service message throughout the entire document (e.g. Page 24, Lines 15-16, a mobile subscriber origination SMS message destined for another mobile subscriber)].

As per claims 6 and 10: note that Allison disclosed wherein the messaging network comprises a wireless network [Fig. 7 and Page 21, Lines 16-18, wireless network].

As per claims 7 and 11: wherein the source comprises a network user and the destination comprises an intermediary vendor [Fig. 7, source/sending MS and receiving MS including intermediary elements including a proxy/gateway, the source been utilized by a mobile subscriber (see Page 21, Lines 16-23)].

As per claim 12: Allison disclosed a method of detecting a routing loop (undesired flooding condition in SMS messaging communication in a telecommunications network), comprising: monitoring message traffic passing through an intermediary interconnecting at least two telecommunication service providers [Fig. 8, intermediary SMS MPP receiving SMS message via SS7 or IP communication link (see also page 25, Lines 4-32, Fig. 7, source/sending MS and receiving MS including intermediary elements including a proxy/gateway, the source been utilized by a mobile subscriber (see Page 21, Lines 16-23))]; as message traffic passes through the intermediary, creating an entry in a database [Page 15, Lines 6-12, Lines 26-29 and Page 19, Lines 8-14, performing lookup

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in the database and if failed to locate a matching node from the message an entry in the database is created for the originating node/entity], setting a source address counter to a predetermined number and storing a timestamp corresponding to a time at which a first message passed through the intermediary [Page 13, Table 1], and incrementing the source address counter and updating the timestamp each time the first message again passes through the intermediary [Page 15, Lines 12-32, Page 19, Lines 8-14, Page 19, Lines 15-19; Fig. 7, proxy (intermediary) component, timestamp and counter functions, Fig. 8 and Page 25, Lines 4-32]; as message traffic passes through the intermediary, creating an entry in a database, setting a destination address counter to a predetermined number and storing a timestamp corresponding to a time at which a second message passed through the intermediary, and incrementing the destination address counter and updating the timestamp each time the second message passes through the intermediary [Page 15, Lines 21-32, if entry in the database is not present, creating one and incrementing the counter and Fig. 8, intermediary SMS MPP]; comparing the source address counter and destination address counter for a given source address and a given destination address, respectively to a source address threshold and destination address threshold; and when the source address counter and destination address counter, respectively exceed the source address threshold and destination address threshold over the course of a predetermined amount of time, triggering an alarm indicative of a routing loop [Fig. 6 # ST9-ST11, Page 14, Lines 7-8, Page 19, Line 15 through Page 20, Line 8, Page 21, Lines 10-15 and Page 20, Lines 12-16, Allison taught a sender/source counter associated with source threshold and similarly destination counter associated with a destination threshold (See Page 13, Table One) and performing a comparison function and when the SMS message transmission rate reach the predetermined threshold indicating a flooding alert and taking appropriate actions].

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Allison substantially disclosed the invention as claimed. However, Allison was silent about specific language recited in the claims, which read, "...adding a new time stamp to an array of time stamps each time a first message pass through intermediary...and adding a new timestamp to another array of timestamps each time the second message passes through the intermediary" as recited in claim 13. However, Gould taught capturing and adding an originating IP address (i.e., source) and timestamp of each electronic mail message passing via the intermediary (i.e., the Email Governor), each message received from a specific source by adding a time stamp in an array of messages associated with the source IP address, where the message originated (See Gould, Fig. 6, # 620, Figs. 2-4, page 2, ¶¶0017-0019 and Page 3, ¶¶0035-0038 and Page 3, ¶¶0041 through Page 4, ¶¶0045). Thus, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Gould and have modified the teachings of Allison, because such modification enables "differentiating between customers who "use" e-mail and those who "abuse" e-mail in a shared network environment by measuring the number of e-mail messages sent per unit of time (the "e-mail message rate")" (see Gould, Page 2, ¶¶0017).

The already combined teachings of Allison and Gould substantially disclosed the invention as recited in the claims. However, the already combined teaching does not explicitly recite iterating through the array of timestamps to access timestamps associated with the counters. However, in these arts, Mazur discloses iterating through the array of timestamps to access timestamps associated with the counters (see Mazur, Figs. 5-6, creating real-time array of timestamps [Column 6, Line 47 through Column 7, Line 16]; Column 8, Lines 43-63; and Column 9, Line 1 through Column 10, Line 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to take the teachings of Mazur related to the methodology of generating and navigating through array of timestamps and have modified the already combined teachings of Allison and Gould in order to properly determine specific time events associated with the data communications (see Mazur, Column 9, Lines 38-67).

As per claim 13: note that Allison disclosed that the source address threshold and the destination address threshold comprise different values [Page 13, Table 1, attribute “Threshold” reciting different threshold levels].

As per claim 14: note that Allison disclosed that the message traffic comprises short message service (SMS) messages [Allison disclosed the message been a shot message service message throughout the entire document (e.g. Page 24, Lines 15-16, a mobile subscriber origination SMS message destined for another mobile subscriber)].

As per claims 5 and 15, the already combined teachings of Allison and Gould disclosed the invention as claimed above in claims 1 and 12. However, the already combined teachings did not mention the messaging system allowing number portability or detecting routing loops caused by number portability. However, examiner note that it was known in the art t the time the invention was made, that a number portability causes a routing loop (for example, see applicant’s admitted prior art on page 2, ¶0004 stating “undesirable looping can often occur in the context of number portability...”). Thus, the fact that such a routing loop is caused by number portability does not further limit the invention as claimed. Furthermore, as evidenced by the teachings of Garcia, the use of number portability was commonly known in the art at the time the invention was made (see Garcia Abstract, Column 9, Lines 1-26). Thus, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of

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Garcia (i.e. commonly known in the art of communication) and have modified the already combined teachings of Allison and Gould, because “Number Portability allows the end user to keep his/her telephone number when moving the subscription from one network provider to another” (See Garcia, Column 1, Lines 24-26).

As per claim 16: note that Allison disclosed that the telecommunications network comprises a wireless network [Fig. 7 and Page 21, Lines 16-18, wireless network].

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

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¹ **Note:** If further prosecution on the merits of the instant application is pursued, applicant is strongly encouraged to further incorporate into the independent claims the details on the implementations of the rolling and sliding window sizes by replacing timestamps and counters with a container/array of timestamps; the operation of garbage collection in removing elements from the container/array of timestamps in a hash table in accordance with the rolling and sliding window sizes and further in combination with the details of how the removal of timestamps associated with two counters is performed (as recited in the specification, page 7, ¶ 0020 through page 8, ¶ 0022). It is examiner's opinion that such modification would help overcome the prior art of record and perhaps place the application in better condition for allowance.

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane Mesfin whose telephone number is (571)272-3927. The examiner can normally be reached on 9:30 AM -7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 572-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yemane Mesfin/
Examiner, Art Unit 2444